CHAPTER 11

ICU/RECOVERY WARDS

STANDARD OPERATING PROCEDURE

500 BED FLEET HOSPITAL

(15 October 1999)

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STANDARD OPERATING PROCEDURES

ICU WARDS

A. MISSION: To provide intensive care to patients who have life threatening or complicated injuries through a full spectrum of contingency operations: (1) acts of armed aggression; (2) humanitarian operations; and (3) natural disasters. To provide Post Anesthesia Care to ICU patients.

B. FUNCTIONS:

1. Provide high acuity/intensive care to hemodynamically unstable patients.

2. Provide post anesthesia care to ICU patients.

C. SPECIAL CONSIDERATIONS:

1. Each twenty bed unit is self-sufficient and the same in design and equipment.

(a) High tech equipment is limited.

(b) The nurses' station is placed in the center of each 20 bed unit to maximize visualization and accessibility to patients.

(c) If feasible, the most critical patients are placed in beds closest to the nurses' station.

(d) The medication locker and CSR cart are placed near the nurses' station for ease of access to supplies. The linen cart is placed at the far end of the ward, near the exterior exit.

(e) Patients' personal gear is placed directly under the beds, so as to not impede foot traffic around the bed. In theaters of aggression, personal protective gear (i.e. gas masks) are strapped to the bed frames to allow access by patients in times of alert status.

(f) In event of peak flow, patient admission to ICU ward is prioritized by level of acuity, need for intensive care monitoring & therapy, and severity of illness or injury.

2. Each ICU unit is equipped with a crash cart to support cardio-pulmonary resuscitation.

3. The designated population for each ICU ward may be changed as different operations dictate. Surgical units or burn unit would convert to medical wards as needed. The plan for acts of aggression operation would be as follows:

(a) ICU One will be designated as the burn unit.

(b) ICU Two and Four will be disignated as the surgical/trauma intensive care unit.

(c) ICU Three will be designated as medical/cardiac intensive care unit.

(d) During humanitarian / natural disaster operations, the majority of hospital would be dedicated to international patients. Consideration should be given to a female only care area with appropriate staffing to accommodate local mores.

E. WORKLOAD: (May be unpredictable)

1. There are 4 ICU Units with 20 beds each for a total of 80 beds.

2. Definition of patient flow status:

(a) Steady state = 80 admissions a day to the hospital, with 24 going to the ICUs.

(b) Peak state = 120 admissions a day to the hospital, with 36 going to the ICUs.

F. ORGANIZATION:

1. Responsibility:

(a) The Ward Medical Officer (WMO) is responsible for the medical care of patients. The WMO reports to the Head of Surgical Service.

(b) The Health Services Division Officer (HS Div Off) is the senior Nurse Corps Officer assigned to the ICU and has administrative responsibility for the operations of the ward. The HS Div Off reports to the surgical or medical Health Services Department Head appropriate to the patient populations, (HS Dept Head), in the Nursing Service Directorate. The HS Div Off receives guidance from the WMO for direction of the medical care of the patients. Staff nurses report to the HS Div Off.

(c) Each ward has a designated Leading Petty Officer (LPO) who is the senior enlisted staff member and oversees the enlisted functions on the ward. The LPO reports to the HS Div Off.

(d) Staff enlisted members report to the Nurse Corps officer in charge of their shift, via the chain of command through their senior enlisted member or LPO.

2. Organizational chart:

May vary with different concepts of operations and numbers of personnel assigned to designated areas.

3. Staffing:

(a) Depending on the theater of operations, the WMO may be assigned to two ICU wards.

(b) One Nurse Corps officer & one Corpsman is assigned per four to five patients as operation and staffing allow. Shifts could be either twelve or eight hour shifts, depending on the type of operation mission and available staffing. For prolonged deployments, eight hour shifts are recommended whenever circumstances allow, to minimize staff fatigue.

(c) At least one respiratory therapist should be assigned per shift to the ICU units to assist in managing complicated airway problems and mechanical ventilated patients.

4. Special Qualifications:

(a) ICU Ward Medical Officer should have Critical Care experience and be familiar with the management of mechanically ventilated patients.

(b) The Division Officer should be fully qualified in critical care with a minimum of three years critical care experience. It is recommended that this individual have Subspecialty Code 1960.

(c) The nurse in charge on each shift should be qualified in critical care. It is recommended that this individual have Subspecialty Code 1960. Staff nurses should have Subspecialty code 1900 if possible.

(d) Senior Corpsman must have critical care experience. It is recommended that other corpsman have critical care experience.

5. Assignment: Billet Sequence Number Other assignment considerations are

(a) Assignment to ICU billets is made by demonstration of professional knowledge, skills, education and demonstrated competency in designated functional area. However, it is important to remember, the closer to the OR core of the hospital any ward is placed, the more critical the need for manning becomes.

(b) Nursing service stands watches on ICU units as outlined above regarding staffing. Conditions of mission change and watch bills need to reflect flexibility in meeting the mission with the available personnel resources.

(c) WMO's stand watches as dictated by the numbers of WMO's available for ICU units and as conditions of the operational mission dictate.

6. Watch Bill: N/A

7. Special watches:

Enlisted personnel may stand extra duty with security or other details, as dictated by the demands of the command and type of contingency operation.

G. TASKS:

1. Provide in-patient intensive/critical care

(a) Recognize intensive/critical care will be rendered, as dictated by the Theater of Operations, available resources and acuity of the casualty.

(b) Recognize the need to improvise due to the types and numbers of patients received and limitations in high tech equipment, supplies and personnel available. There is a strong need to adapt to ever changing conditions and circumstances.

(c) Render optimal care to patients as allowed under various adverse environmental conditions.

2. Operate in a manner providing optimal safety for patients and staff.

(a) Adjust staff work schedules to minimize fatigue and reduce adverse impact on morale and professional performance.

(b) Fluid spills must be clearly marked and gotten up as soon as possible.

(c) Electrical equipment must be properly inspected before use. Tagged or equipment marked out of service, must not be used until cleared by Biomedical Repair.

(d) All hands should be checked out on the safe operation of the field bed, wheeled cart, suction equipment, defibrillator/monitor and ventilator equipment.

3. Maintain ICU equipment in operational order and keep adequate consumable supplies on unit as required to meet operational mission for functional areas.

Recognize equipment repairs and replacement of consumable supplies are not always possible in field conditions. Plan repair / replacement strategy in advance, whenever possible. Adapt to ever changing circumstances.

4. Maintain optimal sanitary treatment environment.

(a) Recognize environmental factors may prohibit sterility or desired level of cleanliness for treatments. Prioritize limited use of sterile supplies, rationing of clean linens, etc. as dictated by operation and conditions encountered.

(b) Maintain optimal preventive medicine practices for patients and staff alike, as dictated by environmental / operational conditions.

H. STANDARD OPERATING PROCEDURES:

1. Safety:

(a) Fire:

(1) Sound alarm

(2) Notify Public Works; Officer of the Day; Dept. Heads

(3) Describe location and type of fire

a Class A = Paper / wood. Use water to extinguish.

b Class B = Flammable liquids: gas, oil, etc. Extinguish with Carbon Dioxide (CO_2) and/or dry chemical.

c Class C = Electrical. Extinguish with special agent (powder). Use Metal - X compound or dry graphite agent.

(4) Evacuate patients from immediate area, following posted evacuation flow chart.

(5) If unable to evacuate patients or others:

a Close doors / tent flaps to confine fumes and smoke.

b Secure utilities in area, such as oxygen and gas.

c Obtain and use nearest correct fire extinguisher.

d Direct firefighters to scene.

(6) Muster all hands (staff and patients) according to fire bill.

(b) Electrical hazards / Power shedding:

(1) Identify potential electrical hazards for all equipment used in functional areas.

(2) Secure, use and stow all equipment in accordance to electrical saftey guidelines, per Public Works policy.

(3) Assure all personnel are properly trained on the use of electric equipment in area.

(4) Keep alternate light supplies (flashlights, batteries, etc.) in the event of a power outage. Prioritize and conserve use of batteries. An AMBU bag should be available at the bedside of all mechanically Ventilated patients.

(c) Vehicular traffic on compound:

Be sure all personnel are aware of external exit of tent and what type vehicular traffic is common upon immediately exiting tent.

(d) Personal Protection Equipment (PPE):

(1) Patients admitted with PPE should have the gear placed where they can reach it in times of alert / alarm status. (i.e. strap gas mask holders to the exterior frame of the patients' beds.) Place additional personal items on floor under each patient's bed.

(2) For patients arriving to the ward without PPE, call the place of origin(i.e. Casualty Receiving, ICU, etc.) to see if they still have the patient's gear. If none available, call Supply to attempt to obtain a replacement for the patient. If none available, the patient will have to go without.

(3) Staff must use their own PPE in case of attack in order to provide optimum support to those injured.

(4) Modifications will need to be made in regard to PPE equipment if patient is on a ventilator.

2. Security:

(a) Muster all staff at changes of shifts. Adhere to command policies regarding compounds restrictions and liberty. Know berthing areas assigned to all staff personnel from functional work area.

(b) In all operations (especially humanitarian / natural disaster missions), be alert to potential theft of supplies from work areas and personal items from berthing areas.

3. Biological / Hazardous Materials:

(a) Standard universal precaution procedures will be followed in the rendering of patient care on the ICU units.

(b) Disposal of contaminated sharps will be collected in designated sharps disposal containers. Public Works will be responsible for the final disposal of the full containers.

(c) Linens will be sent to laundry for cleaning using universal precaution guidelines.

(d) For any other hazardous materials handling questions, consult Public Works.

4. Communications:

(a) Do not discuss patients' conditions or release information about patients to anyone outside the unit.

(b) Refer any outside requests for patient information to the Command Administrative Office.

(c) During acts of aggression, know which phone lines are secure and which are not. Do not discuss any sensitive information over unsecured phone lines.

(d) Orient all staff / patients to Command compound alert signal system.

(e) Report bed availability via Chain of Command through the Nursing Service Directorate at the end of each shift and periodically as required during periods of Peak Flow. The report should include:

(1) Number of current inpatient census.

(2) Number of admissions since last report.

(3) Number of currently available beds.

(4) Number of discharges / deaths / transfers out of hospital since last report.

(5) Number of anticipated changes in bed availability over the next shift / day.

(6) Note: The above report is to focus on numbers and categories of patients, not names and details of each case.

(7) Keep Command Interest reports to a minimum. Appropriate examples would be:

a High level commander of joint forces / host nation.

b Unique disease / infection with contagion risk potential for command.

5. Admissions:

(a) Required upon admission:

(1) Patient ID: Dogtag, patient arm band, or ID card, etc.

(2) Admission diagnosis and treatment orders from health care provider either from other areas of the hospital or to be done by WMO upon arrival to the ward.

(3) History and Physical may or may not accompany patient, depending upon the scenario under which the patient was admitted.

(4) Entry of patient treatments and medications on unit Kardex's for treatments and medications to be executed.

(5) Transfer patient to unit bed. Orient patient to narrow bed surface. Use bed straps as indicated.

(6) Stow personal gear under each bed. Secure any PPE gear so that it is readily accessible to the patient. (i.e. hanging it on the frame of the bed.)

(7) Orient patient to command security alarm system, if applicable

(b) Notify Mess Deck of admission.

6. Equipment / Consumable Supplies:

(a) Staff is responsible for maintaining all ward equipment in operational order. If repairs are identified, contact Public Works for assistance of BioMed Tech.

(b) All staff needs to be operationally competent in using field medical equipment. Orient all staff to use of field medical gear found on ICU unit.

(c) Unit Crash Carts should be checked for presence of appropriate equipment and current medications. Carts should be stocked with appropriate drugs required for resuscitation per ACLS protocols.

(d) Upon completion of inspection, cover cart with a clean sheet and label it with tape indicating the date of inspection and name of person completing inspection.

(e) Label tape with the date of first drug to become expired.

(f) Keep cart covered until next use or date first drug will be expired.

(g) Restock cart after each use or expiration of first drug.

(h) Keeping cart covered and secured in between uses helps maintain cleanliness in field environment and minimizes unnecessary busy work of re-inspection of unused cart.

(i) Linens will be restocked to wards per availability and frequency established by resources available to command. Public Works will establish a restocking schedule. Ward staff needs to adjust usage of linens to fit the available resources of command.

7. Patient Transfers:

(a) Intrahospital:

(1) Admissions to ICU come from other parts of the hospital: Casualty Receiving, Wards, OR, & etc. These areas should provide a transfer report / medical orders by either phone or in person upon transfer.

(2) Some times patients will be admitted to ICU without medical work-up due to overload in Casualty Receiving. The WMO will then do the admission work-up upon arrival to the ward.

(3) Obtain all available personal gear from other areas of hospital upon receiving patient to ICU.

(4) Notify HS Dept Head of admissions collectively via above Nursing Service

report of bed availability (24 Hour Nursing Report). No need to notify HS Dept Head of individual admissions, unless there are unusual circumstances. Keep report limited to numbers and types of patients.

(5) When transferring patients from one area of the hospital to another, be sure all personal gear and medical records are sent at the time of transfer. Again, a phone report or personal report at the time of transfer is needed. Give the receiving area as much advance notice of the transfer as possible.

(6) Anesthesia staff will give report of surgical patients to receiving nurse Concerning patient's condition to include: Name, age, allergies, pertinent history, operation performed, anesthetic agent, est. blood loss, fluids, pertinent intraoperative complications & medications, drains & catheters, stat orders, etc. Patient will require one on one care until stable and able to manage airway or receiving ventilator support with stable vital signs.

a All patients will be assessed by anesthesia staff or ward medical officer prior to extubation.

b Post anesthesia patients requiring post ICU care should be connected to a cardiac monitor, if available, until stable. If available, all mechanically ventilated patients and post anesthesia patients will be connected to a pulse oximeter to monitor SaO2.

(b) Interhospital:

(1) When transferring from one US military facility to another within a theater of operations, follow standardized airvac / tri-service transfer policies and procedures.

(2) Communicate within current hospital command's Administration Office to initiate transfer and to verify proper procedures to follow.

(3) When transferring within a theater of operations to multi-national facilities, follow policies established for the given theater of operation. These policies and procedures may be established at the initiation of the operation and may vary from one operation to another.

(c) When preparing patient for transfer:

(1) Inform patient of transfer plans and transportation arrangements.

(2) Send all medical records and personal gear with patient.

(3) Follow guidelines for sending transportation medications with patient. (Usually, this means a three day supply of medications.)

(4) Prepare patient for transport, per airvac procedures, as appropriate. (Example: Colostomy preparation prior to airvac.)

(5) Any equipment sent with patients for transfers will not return to the hospital command. Plan transfers and use of command equipment accordingly.

(d) Discharges from hospital:

(1) Discharge active duty US and multi-national military personnel from the hospital to their respective commands via the hospital command's Administrative Office.

(2) Discharge nationals from hospital to their community, via hospital command's administrative policies.

(3) Discharge POW's from hospital via Security to appropriate authority.

(4) Send medical records with all discharged patients. No patient medical records are retained in a Fleet Hospital.

8. Decedent Affairs:

(a) Upon pronouncement of death, prepare body for transport, as time and resources allow.

(b) WMO completes death certificate (DD 2064) and the body is tagged (Death Tag DA 3910)

(c) Notify Administrative Office and transport patient to designated morgue area of compound. Send medical records and personal gear to Administrative Office.

I. CLINICAL POLICIES GUIDELINES:

1. Intensive care/critical care practice: procedures and protocols

(a) Nursing service personnel shall render patient care using Lippencott's textbook of Medical / Surgical Nursing (latest edition) as the reference to be followed for all procedures and protocols.

(b) ICU personnel also shall render patient care using the current American Association of Critical Care Nurses Procedure Manual for Critical Care adapted to the theater of operation.

(1) In field conditions, the latest equipment, supplies or other resources may not be available to allow staff to follow the nursing procedures and protocols as recommended per the text references.

(2) Staff must adjust / modify procedures and protocols, given the available resources, to the best of their ability in the operational field conditions encountered.

2. Resuscitation / cardiopulmonary arrests on ICU Units:

(a) Staff will follow the current practice guidelines for cardiopulmonary resuscitation as established by the American Heart Association (BLS / ACLS) training certification programs.

(b) Crash carts will be maintained on each ICU unit and stocked with the necessary equipment and drugs needed per above resuscitation procedures.

3. ICU unit routines and schedules:

(a) While adherence to normal Navy inpatient MTF ICU procedures is desirable to the extent possible, field conditions may greatly interfere or prevent "normal" routines and schedules.

(b) Staff must recognize and adapt routines and schedules to fit the theater of operation encountered in the field situation.

(1) Example: Food for ICU patients will be ordered from galley, per procedure instructions established by galley for the given theater of operations. Availability of special diets will be non-existent or extremely limited. Newly admitted patients to the ICU may not have eaten for quite some time and procurement of food upon admission would be an immediate priority if diet is ordered.

(2) Scheduling of staff meals during shifts will need to be equitable, but flexible, depending on operational conditions at hand.

(c) All schedule II & III drugs as identified by pharmacy policy (narcotics & controlled drugs) will be stored in a medication locker with a double lock. The keys to the medication locker will be in the custody of a Nurse Corps Officer. Narcotics and controlled substances will be logged out by a Nurse Corps Officer. When only a portion of the drug is used, discard the unused portion with a witness present and record on narcotic log out form. All narcotics and schedule III drugs will be verified by two nurses each shift: one reporting on duty and one reporting off.

4. Pharmacy and laboratory capabilities:

(a) Pharmacy will have a limited formulary in a given theater of operation. Conditions

may also limit replenishment of supplies to the command as the operation continues. Staff needs to conserve resources as indicated. While outdated medications may have less effectiveness, in a field situation, they may need to be used if no replacements are available. Consult with Pharmacy Officer regarding safety of use of expired items.

(b) The laboratory will have limitations of testing capabilities. Each command and operation will clarify what testing capability is available. Specimen collection procedures may need to be modified, per command instructions.

J. STANDARDS AND JOB DESCRIPTIONS: N/A

K. DOCUMENTATION: N/A